

STAIRS4WORDS: A new adaptive test for assessing receptive vocabulary size in English, Dutch and German

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INTRODUCTION

- Studying language often requires a precise and reliable estimate of the language user's vocabulary size [1].
- Current vocabulary tests are insufficient as they:
 - 1) ...employ a fixed order of items
 - 2) ...approximate item difficulty using word frequency
 - 3) ...involve abilities not related to word knowledge (e.g., picture recognition, sentence comprehension): E.g.

PPVT [2]

Andringa [3]

This question is often examined by *exegetes*.

1) somebody studying nature.

2) somebody studying holy texts

3) somebody interested in black magic

4) somebody interested in life after death

5) I don't know the meaning

INCENTIVE

- *Stairs4Words* intends to overcome these problems:
 - Item difficulty is estimated using word prevalence [4] rather than frequency.
 - Item difficulty is tailored to participant's performance level using a staircase procedure [5].
 - Simple task: Participants indicate whether or not they know a given target word.
- The test will be available in Dutch, English, and German and run online

[1] Mainz et al. (2017). Frontiers in Psychology., [2] Dunn & Dunn. (2007)., [3] Andringa et al. (2012). Lang. Learn., [4] Keuleers (2015). QJEP., [5] Leek (2001). Perception & Psychophysics.

STAIRS4WORDS

Two tracks operating at the back-end, not noticeable to the participants: 'Fast track' and 'Fine tuning'.

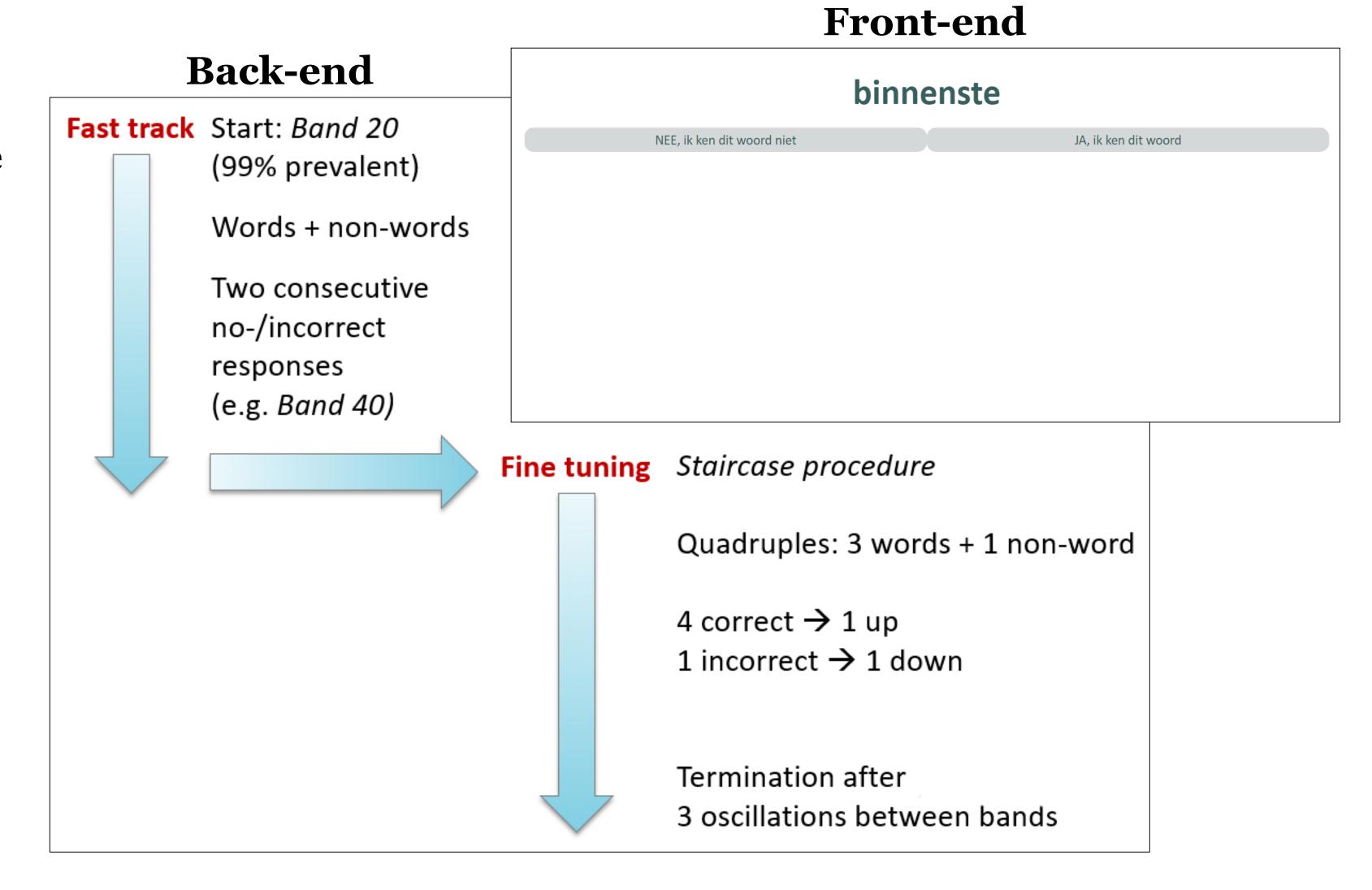
Target word presented in written from.

Fast track aimed at getting participant to vicinity of their end score.

Fine Tuning meant to determine their end score by applying staircase procedure.

Participant's score is the last band where an entire quadruple was responded to correctly.

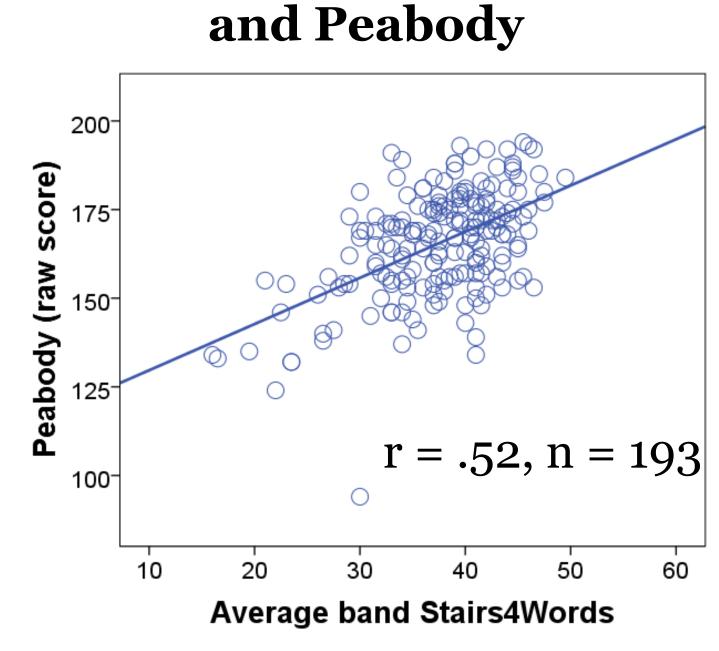
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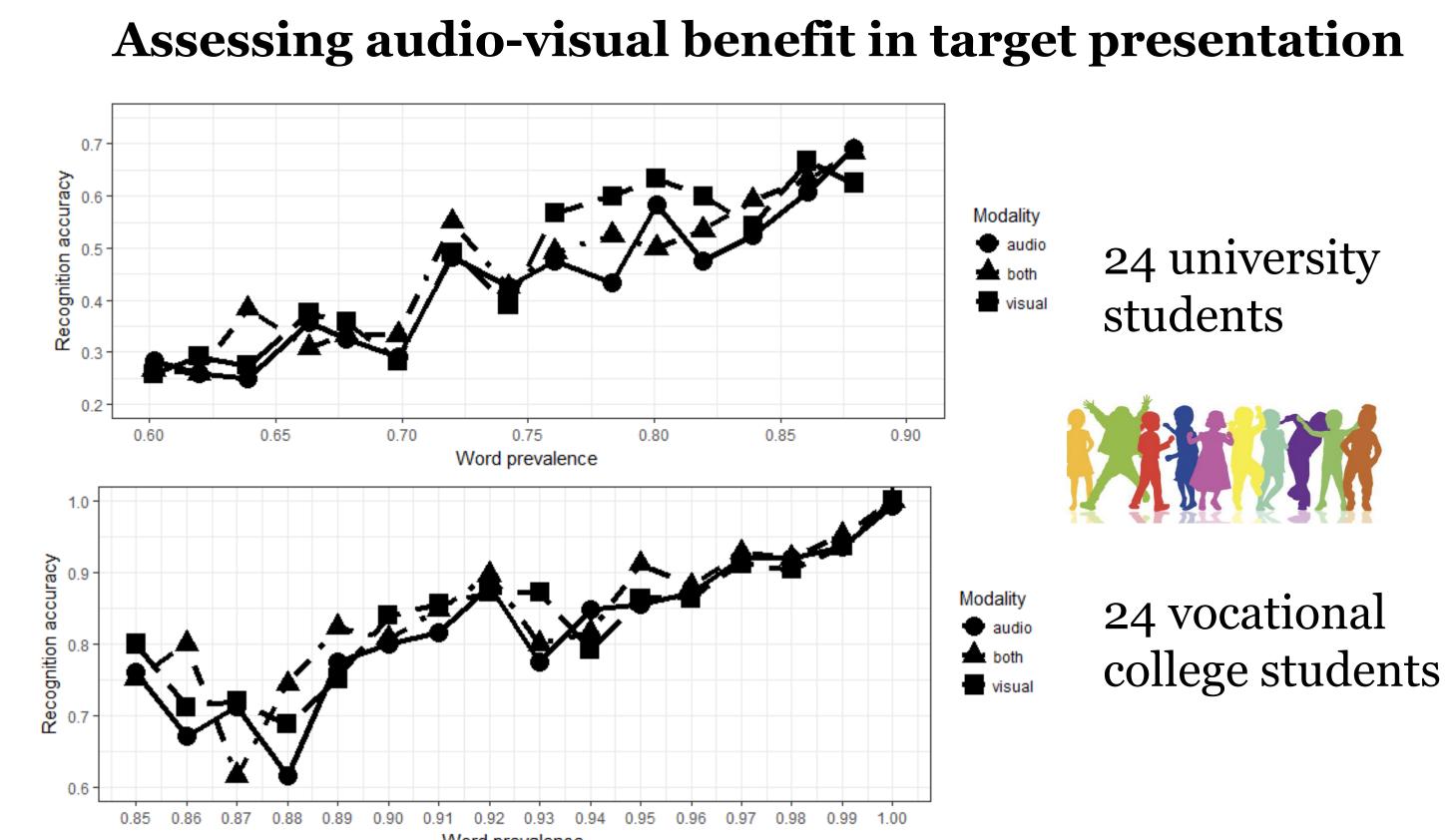
PILOTS IN DUTCH STUDENTS WITH DIVERSE EDUCATIONAL BACKGROUNDS

parallel versions un $_{50}$ $_{50}$ $_{50}$ $_{40}$ $_{10}$ $_{10}$ $_{20}$ $_{30}$ $_{40}$ $_{40}$ $_{50}$ $_{60}$ Band Stairs4Words 1st Run

Correlation between



Correlation Stairs4Words



CONCLUSIONS

- There is no obvious benefit of audio, or audio-visual presentation for either group of participants.
- Stairs4words is an efficient and reliable way of assessing vocabulary in young adults.







